

REMARKS

The Official Action dated May 27, 2003 has been carefully considered. Accordingly, the changes presented herewith, taken with the following remarks, are believed sufficient to place the present application in condition for allowance. Reconsideration is respectfully requested.

By the present amendment, claim 1 has been amended to correct several typographical errors and to include a limitation from claim 14. Claims 2, 5-7, 9, 13, 15, 21, 22 and 29 have been written in independent form, and claim 14 and nonelected claims 30-42 are cancelled. Claims 43-47 are added and contain limitations from original claims 2, 7, 8, 15 and 29, respectively. It is believed that these changes do not involve any introduction of new matter, whereby entry is believed to be in order and is respectfully requested.

In the Official Action, the Examiner indicated that claim 24 was allowed and that claims 2, 5-7, 9-11, 13, 15-23, 25, 26 and 29 would be allowable if rewritten to include all limitations of the base claim and any intervening claims. Claims 2, 5-7, 9, 13, 15, 21, 22 and 29 have been rewritten in independent form, and to correct the typographical errors in previous claim 1. It is therefore believed that claims 2, 5-7, 9, 13, 15, 21, 22 and 29, claims 10 and 11 dependent on claim 9, claims 16-20 dependent on claim 15, claim 23 dependent on claim 22, and claims 25 and 26 dependent on claim 24 are in prima facie condition for allowance. Reconsideration is respectfully requested.

The Examiner indicated that claims 30-42 remain nonelected. Accordingly, claims 30-42 have been cancelled.

The disclosure was objected to owing to several informalities. As the specification has been amended to indicate that EWC refers to equilibrium water content, the dependency of claim 19 has been revised to claim 18, and claim 29 has been rewritten in independent

form, it is believed that the objection to the disclosure has been overcome. Reconsideration is respectfully requested.

Claims 1, 8, 14, 27 and 28 were rejected under 35 U.S.C. §102(b) as anticipated by the Tahan U.S. Patent No. 5,135,965. The Examiner asserted that Tahan discloses hydrogel-forming polymers comprising hydrophilic monomers such as N-vinyl lactam and a polyunsaturated polymeric cross-linking agent and that examples 1 and 2 disclose the tensile strength and polymer and water content as claimed.

However, Applicants submit that the hydrogels, implants and lenses defined by claims 1, 8, 27 and 28 are not anticipated by and are patentably distinguishable from the teachings of Tahan. Accordingly, this rejection is traversed and reconsideration is respectfully requested.

More particularly, according to claim 1, the invention is directed to a hydrogel comprising a network of hydrophilic polymer having hydroxyl group-carrying carbon to carbon backbones and having a tensile strength of at least 1 MPa. The network is formed by crosslinks in the hydrophilic polymer. Claim 27 is directed to an implant made of such a hydrogel, while claim 28 is directed to an ophthalmic lens made of such a hydrogel.

Tahan broadly discloses that hydrogel-forming polymers used in intraocular lenses can be formed from hydrophilic monomers, numerous examples of which are given in column 3, some of which contain hydroxyl groups. However, Applicants find no teaching by Tahan of hydrophilic polymers having hydroxyl group-carrying carbon to carbon backbones, namely -C-C-C-C- backbones to which hydroxyl groups are attached. Moreover, examples 1 and 2 relied upon by the Examiner as disclosing tensile strengths within the range of claim 1, i.e., of at least 1 MPa, are not hydrophilic polymers having hydroxyl group-carrying carbon to carbon backbones. Additional Tahan examples employ the hydroxyl group-containing monomer hydroxyethyl methacrylate (HEMA) which, as noted in the present specification,

Application Serial No. 09/829,861
Amendment dated October 27, 2003
Reply to Official Action dated May 27, 2003

has a low tensile strength of about 0.5 MPa. Accordingly, Applicants find no teaching by Tahan of a hydrogel as claimed, or an implant or ophthalmic lens formed from such a hydrogel.

Anticipation under 35 U.S.C. §102 requires that each and every element as set forth in the claims is found, either expressly or inherently described, in a single prior art reference, *In re Robertson*, 49 U.S.P.Q.2d 1949, 1950 (Fed Cir. 1999). In view of the deficiencies in the teachings of Tahan with respect to hydrophilic polymers having hydroxyl group-carrying carbon to carbon backbones, Tahan does not disclose each and every element of the present claims, and therefore does not anticipate the present claims under 35 U.S.C. §102. Thus, the rejection based on Tahan has been overcome. Reconsideration is respectfully requested.

Claims 1, 3, 8, 14, 27 and 28 were rejected under 35 U.S.C. §102(e) as being anticipated by the Makabe et al U.S. Patent No. 6,262,208. The Examiner asserted that Makabe et al disclose an ocular lens material made from copolymer containing N-vinyl lactam, a fluorine-containing unsaturated monomer, a hydrophilic (meth)acrylamide and crosslinking agents.

However, Applicants submit that the hydrogels, implants and lenses defined by claims 1, 3, 8, 27 and 28 are not anticipated by and are patentably distinguishable from the teachings of Makabe et al. Accordingly, this rejection is traversed and reconsideration is respectfully requested.

The hydrogels defined by claim 1 are discussed in detail above. Applicants find no teaching by Makabe et al of hydrophilic polymers having hydroxyl group carrying carbon to carbon backbones as required by claim 1. Rather, Makabe et al disclose copolymer containing N-vinyl lactam, a fluorine-containing unsaturated monomer, a hydrophilic (meth)acrylamide, crosslinking agent and a dicarboxylic acid divinyl ester. While the

Application Serial No. 09/829,861
Amendment dated October 27, 2003
Reply to Official Action dated May 27, 2003

(meth)acrylamide is disclosed as hydrophilic, the resulting polymer of Makabe et al does not have hydroxyl group carrying carbon to carbon backbones as required by claim 1. In view of this deficiency in the teachings of Makabe et al with respect to hydrophilic polymers having hydroxyl group-carrying carbon to carbon backbones, Makabe et al do not disclose each and every element of the present claims, and therefore do not anticipate the present claims under 35 U.S.C. §102. Thus, the rejection based on Makabe et al has been overcome.

Reconsideration is respectfully requested.

Finally, claims 1, 3, 4, 8, 12, 14, 27 and 28 were rejected under 35 U.S.C. §102 as being anticipated by the Ofstead U.S. Patent No. 4,840,992. The Examiner asserted that Ofstead discloses copolymers of poly(vinyl alcohol) which could be hydrated and that the exemplary polymers include water content and tensile strength as claimed.

However, Applicants submit that the hydrogels, implants and lenses defined by claims 1, 3, 4, 8, 12, 27 and 28 are not anticipated by and are patentably distinguishable from the teachings of Ofstead. Accordingly, this rejection is traversed and reconsideration is respectfully requested.

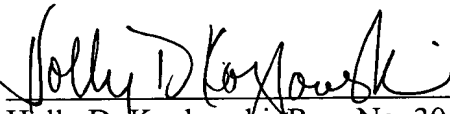
The hydrogels defined by claim 1 are discussed in detail above. Applicants find no teaching by Ofstead of such hydrogels or of implants or lenses formed therefrom. While Ofstead discloses copolymers of poly(vinyl trifluoroacetate) or poly(vinyl alcohol) having tensile strengths greater than 20.7 kg/cm^2 , Ofstead notes that the copolymers are non-crosslinked (Abstract). On the other hand, according to claim 1, the network of hydrophilic polymer having hydroxyl group-carrying carbon to carbon backbones and having a tensile strength of at least 1 MPa is formed by crosslinks in the hydrophilic polymer. Thus, not only does Ofstead not teach the presently claimed hydrogels, Ofstead teaches away from the claimed hydrogels.

Application Serial No. 09/829,861
Amendment dated October 27, 2003
Reply to Official Action dated May 27, 2003

Accordingly, Ofstead does not disclose each and every element of the present claims, and therefore does not anticipate the present claims under 35 U.S.C. §102. Thus, the rejection based on Ofstead has been overcome. Reconsideration is respectfully requested.

It is believed that the above represents a complete response to the rejections under 35 U.S.C. §§ 102 and places the present application in condition for allowance. Reconsideration and an early allowance are requested.

Respectfully submitted,

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